

REMARKS

In response to the final office action dated June 26, 2008 and the advisory action dated September 15, 2008, the applicant amended claims 1-2, 5, 8-9, 12, 15-16, 18-19, 21-22, and 24-25. Claims 1-26 are pending, with claims 1, 8, 15, 18, 21, and 24 being independent. The Applicant thanks the Examiner for the courtesy of holding a telephone interview with the Applicant's representatives on October 14, 2008. During the interview, amendments to claims and patentability of the claims were discussed.

Favorable reconsideration is respectfully requested in view of the above amendments and the following comments of the Applicants, which are proceeded by related comments of the Examiner in small bold type:

Double Patenting

Claims 1,3-5, 7-8, 10-12, 14-15, 17-18, 20-21, 23-24 and 26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 4-5, 7-9, 11-12, 14-15, 16, 18-19, 21-22, and 24-25, of copending Application No. 10/749,792, respectively, in view of Salett et al (US 6,490,276). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims recite substantially same limitations, except delivering the packet to an exception processor being shared by the packet forwarding device in the stack. Salett discloses a method for forwarding a data frame from a first switch to a second switch, thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Salett's method of forwarding data frames to the instance application in order to transmit data effectively.

Applicant will consider filing a terminal disclaimer upon an indication of allowable subject matter.

Claim Rejections - 35 USC 103

Claims 1-4, 7-11, 14-17 and 18-26 are rejected under 35 U.S.C. 103(a) as being anticipated by Hebb et al (US 6,463,067), in view of Salett et al (US 6,490,276), and further in view of Kalkunte et al (US 7,139,269). (Office Action of June 26, 2008.)

Hebb is relied upon to show receiving a packet at a first device in a stack of forwarding devices configured to direct the packet to a destination external to the stack (e.g., packet is received at a line interface in a stack of

line interfaces, configured to forward the packet to a destination address indicated within the packet; Figure 1); identifying an exception associated with the packet (e.g., forwarding and filtering information; col. 1: lines 36-45). (Advisory Action of September 15, 2008.)

Hebb is understood to filter packets to determine whether the packets match filter criteria. Based on this determination, operations may be taken such as intentionally discarding a packet or forwarding a packet to its destination (col. 8, lines 24-38). However, Hebb does not disclose or suggest identifying an exception associated with a packet, in which the exception represents an external destination of the packet as being unidentifiable by the packet, as recited by amended independent claim 1. Rather, each of Hebb's packets contain an identifiable IP destination address since an IP destination address mask is applied to determine whether the destination address of a packet matches that of the mask. As Hebb reads:

Part or all of the following information is provided by the NMS or FP 58 for filters: IP Destination Address with mask; IP Source Address with mask; IP protocol identifier; TCP/UDP Source Port and Destination Port identifiers; IP Type of Service identifier and mask, and miscellaneous flags. The various information elements from a filter are compared with corresponding elements from each received packet in order to determine whether the packet matches the filter criteria. If so, some specific action for the filter is taken, such as intentionally discarding a packet. If not, some default action is typically taken, such as allowing the packet to proceed toward its destination. (col. 8, lines 24-38.)

Accordingly, Hebb does not describe and would not have made obvious identifying an exception associated with the packet, in which the exception represents a destination (external to a stack) of the packet as being unidentifiable by the packet, as recited by amended independent claim 1. Furthermore, the Examiner conceded Hebb does not describe inserting a vector in a packet to indicate an identified exception, and delivering the packet based on the inserted vector to an exception processor being shared by the packet forwarding devices in the stack, also recited by claim 1.

As mentioned in the advisory action of 15 September 2008, the Examiner looks to Salett to provide vector insertion into packets. In this regard the Examiner stated:

...Salett is used to show inserting a vector in the packet for delivering the packet to an exception processor being shared by the forwarding devices in the stack (e.g., using/updating the 64-bit header to indicate destination information for each set of data frames transmitted on the network; col. 3: lines 44-63 and col. 4: lines 15-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Salett's

method of identifying station and switches in Hebb's system in order to optimize the amount of resources required for a network.

Salett is understood to describe inserting vectors into packet headers to indicate the source and destination of the respective packet for direct delivery. However, Salett appears silent in regards to identifying an exception associated with a packet, let alone an exception that represents that an external destination of the packet is unidentifiable by the packet. Since Salett describes inserting source and destination information into packet headers, none of packets would be associated with, or need to identify, an exception (let alone an exception that represents that an external destination of the packet is unidentifiable by the packet). Salett appears to identify whether a physical destination port exists (based upon destination information contained in a packet) and floods the packet to each port, in connection within a network, when the physical destination does not exist. In this regard, Salett reads:

Switch 205 compares the destination station of the data frame with its station list. If the data frame is the first data frame transmitted through the switch 205 which has station B 223 as a destination station, station B 223 will not be found in the station list of switch 205. Switch 205 then sends or "floods" the data frame out all ports on switch 205 and to all other switches on the network. (col. 4, lines 50-59.)

Thus, the combined teachings of Hebb and Salett does not describe inserting a vector into a packet to indicate an identified exception as recited in claim 1 since both references are silent in regards to such exceptions. As such the combination would not have been "identifying an exception associated with the packet, wherein the exception represents the external destination of the packet as being unidentifiable by the packet" and "inserting a vector in the packet to indicate the identified exception", let alone "delivering the packet based on the inserted vector to an exception processor being shared by the packet forwarding devices in the stack."

Kalkunte used to show the exception processor (port 8) is being shared by clients (ports 1-6). It is noted Kalkunte's shared server (i.e., exception processor) is well known in the art, e.g., a router routes traffics for many sources, or a server can share resources among/be connected to many clients. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Kalkunte's shared exception processor in Hebb-Salet's system, motivated by the need of sharing network resources among many clients. (Advisory Action of September 15, 2008.)

Kalkunte's port 8 of FIG. 41 is not an exception processor that receive a packet that contains a vector which is indicative of an identified exception, as recited by amended independent claim 1. Nor is port 8 an exception processor shared by a stack of packet forwarding devices that directs the packet to an external destination. Port 8 is a destination port that receives packets from source ports 1-6, which are not packet forwarding devices. As Kalkunte explains:

In the example illustrated in FIG. 41, ports 1-6 are sending packets to port 8. At some point in time if there is substantial traffic from ports 1-6 then port 8 will get congested. In switches that do not implement a mechanism to prevent Head of Line blocking, the congestion on one port can affect the traffic going to other port. In FIG. 41, even though port 8 is congested, port 1 and 7 should be able to communicate with each other without any problem. The present invention supports a mechanism to prevent Head Of Line Blocking based on number of packets per egress port per COS basis and number of cells on per egress port. (col. 30, lines 12-23.)

Accordingly, Kalkunte is sending packets directly from ports 1-6 to port 8 and is concerned of possible congestions at port 8, and is silent in regards to sending a packet based on a vector (indicative of an exception) to an exception processor, as provided by amended independent claim 1. As such, claim 1 is considered patentable over Hebb, Salett, and Kalkunte, individually or in combination.

Independent claims 8, 15, 18, 21, and 24 each contain features similar to those contained in amended claim 1 and are patentable for at least the reasons discussed with respect to claim 1.

Dependent claims 2-4, 9-11, 14, 16-17, 19-20, 22-23, and 25-26 are also patentable over Hebb, Salett, and Kalkunte, for at least the reasons set forth in its corresponding independent claim and, as such, has not been addressed specifically herein.

Claims 5-6 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebb-Salett-Kalkunte as respectively applied to claims 1 and 8 above, in view of Alabli et al (US 5,721,820), hereinafter Alabli.

As explained above, claims 5-6 and 12-13 are patentable over Hebb, Salett, and Kalkunte. Alabli does not remedy the deficiencies of Hebb, Salett, and Kalkunte, at least because Alabli does not describe and would not have made obvious inserting a vector in a packet for delivering the packet to an exception processor being shared by packet forwarding devices in a stack, as recited by claims 1 and 8, from which claims 5-6 and 12-13 depend, respectively.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at the address shown below. All telephone calls should be directed to the undersigned at 617-368-2191.

\$130 for the Petition for Extension of Time fee is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account Authorization. Please apply any other charges or credits to account 06-1050, referencing Attorney Docket No. 10559-0906001.

Respectfully submitted,

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